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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/747,968

12/29/2003

Hamid Ould-Brahim

42871-0020

9917

23577 7590 04/08/2008

RIDOUT & MAYBEE

SUITE 2400

ONE QUEEN STREET EAST

TORONTO, ON M5C3B1

CANADA

EXAMINER

JUNTIMA, NITTAYA

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/747,968	Applicant(s) OULD-BRAHIM, HAMID	
	Examiner NITTAYA JUNTIMA	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 1/4/2008.
2. Claims 15-20 are allowed.
3. Claims 7-14 are currently rejected under 35 U.S.C. 112, first paragraph.
4. Claims 1-6 remain rejected under 35 U.S.C. 103(a).

Specification

5. The amendment filed 1/4/2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “wherein a discovery mechanism of said *second* layer-1 provider edge device simplifies operations for a layer-2 service provider” as amended in claim 7 (emphasis added). The specification only supports using a discovery mechanism of a first layer-1 provider edge device to distribute layer-2 VPN information to a second layer-1 provider edge device, wherein the discovery mechanism of the *first* layer-1 provider edge device simplifies operations for a layer-2 service provider by eliminating the need for the layer-2 VPN provider edge device to implement full VPN auto-discovery for layer-2 VPN services (paragraphs 0014, 0018, and 0021). In other words, the specification does not disclose the use of the discovery mechanism of the second layer-1 provide edge device or how the discovery mechanism of the second layer-1 provide edge device would simplify operations for a layer-2 service provider.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose “wherein a discovery mechanism of said *second* layer-1 provider edge device simplifies operations for a layer-2 service provider” as amended in claim 7 (emphasis added). The specification only supports using a discovery mechanism of a first layer-1 provider edge device to distribute layer-2 VPN information to a second layer-1 provider edge device, wherein the discovery mechanism of the *first* layer-1 provider edge device simplifies operations for a layer-2 service provider by eliminating the need for the layer-2 VPN provider edge device to implement full VPN auto-discovery for layer-2 VPN services (paragraphs 0014, 0018, and 0021). In other words, the specification does not disclose the use of the discovery mechanism of the second layer-1 provide edge device or how the discovery mechanism of the second layer-1 provide edge device would simplify operations for a layer-2 service provider.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 10/265,621 which is an art of record, Casey (US 2003/0142674 A1) and has a common assignee with the instant application in view of another art of record, “BGP/MPLS VPNs” by E. Rosen (hereinafter “Rosen”).

Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application. This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention “by another,” or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. This rejection might also be overcome by showing that the copending application is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claim 1, as shown in Fig. 2, Casey teaches a network comprising:

A first carrier network employed by a layer-1 VPN service provider (Core PEs 110, 112, 114 and MPLS Core 100 constitute a first carrier network which must be employed by a layer-1 VPN service provider, paragraphs 0025-0029)).

Layer-1 VPN information created within said first carrier network (VPLS peer group information such as IP addresses of Core-PEs is determined by auto-discovery within the core network, paragraphs 0055-0057).

A second carrier network employed by a different service provider (SETs 130, 184, 186, and Edge PEs 120, 124, 126 constitute a second carrier network which must be employed by different service provider at layer-2, paragraphs 0025-0029).

A layer-2 VPN information created within said second carrier network (a layer-2 VPN information reads on a set of addresses which are at the SETs 130, 184, 186 and Edge PEs 120, 124, 126 sites, paragraphs 0023, 0032, 0059).

However, Casey does not explicitly teach a BGP session for transmitting said layer-2 VPN information from said second carrier to said first carrier network.

In an analogous network in which PEs (equivalent to Core PEs in layer-1 VPN) learn routes from CEs (equivalent to Edge PEs in layer-2 VPN), Rosen teaches that a BGP session is used for transmitting the set of address prefixes at CE router's site or attributes of routes from CE to PE (equivalent to transmitting layer-2 VPN information from a second carrier network to a first carrier network). See pages 16-18.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Casey to incorporate the concept of using a BGP to transmit information between two different levels of edge routers such that a BGP session would be used for transmitting said layer-2 VPN information from said second carrier to said first carrier network as claimed. The suggestion/motivation to do so would have been to pass routing

information between systems run by different administrations using BGP as suggested by Rosen (page 17, item 4b).

Regarding claims 2 and 3, Casey teaches that layer-1 VPN auto-discovery is carried out within said first carrier network (paragraph 0057), however, the combined teaching of Casey and Rosen does not explicitly teach that an auto-discovery mechanism for said second carrier network is outsourced to said first carrier network and layer-2 VPN auto-discovery is also carried out within said first carrier network.

However, similar to layer-1 VPN auto-discovery, an official notice is taken that it is well known in the art to use layer-2 VPN auto-discovery mechanism for a carrier network to enable network devices to learn about VPN routing information and one another.

Therefore, based on the connectivity of customer A as shown in Fig. 2 of Casey which has three sites physically connected to three different SETs and Edge-PEs in a distributed manner (all of which constitute the second carrier network) through a core network 100 belonging to first carrier network, it would have then been obvious to one skilled in the art at the time invention was made to carry out (equivalent to outsourcing since detail implementation of the outsourcing is not defined) an auto-discovery mechanism for said second carrier network through said first carrier network. The suggestion/motivation to do so would have been to enable different SETs and Edge-PEs that are physically connected to one another through first carrier network in a distributed manner to learn about VPN routing information and one another.

Regarding claim 4, as shown in Fig. 2, Casey teaches that said first carrier network includes at least two provider edge devices (110, 112, and 114), and a backbone separates said at least two provider edge devices.

Regarding claim 5, as shown in Fig. 2, Casey teaches that said at least two provider edge devices are layer-1, and said backbone (MPLS 100, paragraph 0024). However, the combined teaching of Casey and Rosen does not explicitly teach that the backbone includes a portion of the Internet. However, an official notice is taken that it is well known in the art that a core MPLS may include a portion of Internet to provide data transmission at a minimum cost since both MPLS and Internet commonly use IP protocol for data transmission. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to further modify the combined teaching of Casey and Rosen such that the backbone would include a portion of the Internet in order to provide data transmission at a minimum cost.

Regarding claim 6, as shown in Fig. 2, Casey teaches that said second carrier network includes a provider edge device (Edge-PE 120 must be layer-2 in order to communicate with SET 130) that is a layer-2 VPN-based provider edge device (see paragraphs 0023 and 0025).

Response to Arguments

9. Applicant's arguments filed on 1/4/2008 have been fully considered but they are not persuasive.

A. In the remarks regarding claim 1, the applicant argues that Casey does not teach "layer-1 VPN information created within said first carrier network."

In response, the Examiner respectfully disagrees. As shown in Fig. 2, Casey discloses core PEs 110, 112, 114 and MPLS Core 100 constitute **a first carrier network** which must be employed by **a layer-1 VPN service provider**, paragraphs 0025-0029. Casey further discloses that VPLS peer group information such as IP addresses of Core-PEs is determined by auto-discovery within the core network, paragraphs 0055-0057. Therefore, as a result of auto-discovery, the VPLS peer group information such as the IP addresses of Core-PEs are determined and become known to a Core-PE which read on **layer-1 VPN information created within the first carrier network**. Thus, claim limitation is met and rejection is maintained.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NITTAYA JUNTIMA whose telephone number is (571) 272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nittaya Juntima/
3/28/2008

/Huy D. Vu/
Supervisory Patent Examiner, Art Unit 2616